

### REMARKS

Claims 1-10, 14, 15, 19, 22-31, 34, 35, 39-42, 46-50, 53, 56, 57, 60-68, 71 and 87-110 constitute the pending claims in the present application. Applicants add new claims 105-110. Support for the subject matter of these claims is found throughout the specification. No new matter has been entered. Applicants respectfully request reconsideration in view of the following remarks. Issues raised by the Examiner will be addressed below in the order they appear in the prior Office Action.

1. Applicants note that the amendments presented in Paper 16 filed October 1, 2002 have been entered in full. Claims 1-10, 14, 15, 28-31, 40-42, 46, 48, 50, 53, 56, 57, 63-68, 71, 87-89 and 93-110 are currently under consideration.
2. Applicants note that an IDS has been filed and the references considered.
3. Applicants have amended the specification to provide the necessary reference to the prior applications.
4. Applicants note with appreciation that the objections to the specification and to claim 62 have been withdrawn. Applicants further note that the rejection under 35 U.S.C. 112, second paragraph, has been withdrawn.
5. Claims 1-10, 14, 15, 28-31, 40-42, 46, 48, 50, 53, 56, 57, 62-68, 71, 87-89 and 93-104 are provisionally rejected under the judicially created doctrine of obviousness-type double patenting as allegedly being unpatentable over claims 3, 6, 10-18, 41-46, 48, 74, 77-79, 85 and 94-97 of U.S. Patent No. 6,444,793. Applicants will submit a terminal disclaimer, if necessary, upon indication of allowable subject matter.
- 6.1 Claims 50, 53, 56, 57, 63-65, 68, 71, 87-89 and 93-104 are rejected under 35 U.S.C.112, first paragraph, as allegedly containing subject matter which was not described in the specification in such a way as to enable one skilled in the art to which it pertains, or with which it is most nearly connected, to make and/or use the invention. Applicants traverse this rejection to the extent that it is maintained in light of the amended claims.

Applicants maintain the arguments of record, and contend that the specification is broadly enabling for hydrophobically modified proteins, and methods of modifying proteins with a hydrophobic moiety. Nevertheless, to expedite prosecution, Applicants have amended the claims to more explicitly point out the features of certain commercially relevant embodiments of the invention. Applicants' amendments are not in acquiescence of the rejection, and Applicants reserve the right to prosecute claims of similar or differing scope.

The amended claims more explicitly point out the structural and functional features of the claimed hydrophobically modified protein, and Applicants submit that claims directed to this subject matter are enabled throughout their scope. Reconsideration and withdrawal of this rejection is respectfully requested.

6.2 Claims 1-10, 14, 15, 28-31, 48, 66-67 and 93-104 are rejected under 35 U.S.C. 112, first paragraph, as allegedly containing subject matter which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventor, at the time the application was filed, had possession of the claimed invention. Applicants traverse this rejection to the extent that it is maintained in light of the amended claims.

Applicants maintain the arguments of record, and contend that the specification provides a thorough description of the methods and compositions which Applicants regard as the invention. Applicants have described the claimed subject matter using both structural and functional features, and accordingly are in full compliance with the requirements under 35 U.S.C. 112, first paragraph. Nevertheless, to expedite prosecution of claims directed to commercially relevant subject matter, Applicants have amended the claims to more explicitly point out the claimed subject matter. Applicants' amendments are not in acquiescence of the rejection, and Applicants reserve the right to prosecute claims of similar or differing scope.

The amended claims more explicitly point out the structural and functional features of the claimed hydrophobically modified proteins, and Applicants submit that claims directed to this subject matter satisfy all of the requirements under 35 U.S.C. 112, first paragraph. Furthermore, claims directed to such subject matter are consistent with the holding of the Federal Circuit in *Regents of the University of California v. Eli Lilly & Co.* Reconsideration and withdrawal of this rejection is respectfully requested.

7. Claims 1, 3-5, 10, 93, 95-97 and 102 are rejected under 35 U.S.C. 102(b) as allegedly anticipated by Jonassen et al. Applicants traverse this rejection to the extent that it is maintained in light of the amended claims.

Applicants maintain the arguments of record with respect to the rejection of the pending claims in light of Jonassen et al., and contend that the claimed subject matter is not anticipated by this disclosure. Nevertheless, to expedite prosecution of claims directed to commercially relevant subject matter, Applicants have amended the claims to more explicitly point out the claimed subject matter. Applicants' amendments are not in acquiescence of the rejection, and Applicants reserve the right to prosecute claims of similar or differing scope. Reconsideration and withdrawal of this rejection are respectfully requested.

8. Claims 1-10, 14, 15, 28-31, 40-42, 46, 48, 66 and 67 are rejected under 35 U.S.C. 103(a) as allegedly being unpatentable over McKay et al. or Chaikof et al. in view of Bergsma et al., Lehninger, Wei et al., Caldwell et al. or Naccache et al. Applicants traverse this rejection to the extent that it is maintained in light of the amended claims.

The cited references neither teach nor suggest each and every limitation of the claims. The claims are directed to methods and compositions of hydrophobically modified hedgehog polypeptides that both maintain the ability to bind the receptor patched, and have an enhanced biological activity. The cited references fail to explicitly teach modification of hedgehog proteins, and thus the cited references fail to satisfy the criteria necessary to undermine the patentability of the claims. Reconsideration and withdrawal of this rejection is respectfully requested.

### **CONCLUSION**

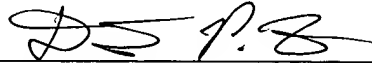
In view of the foregoing amendments and remarks, Applicants submit that the pending claims are in condition for allowance. Early and favorable reconsideration is respectfully solicited. The Examiner may address any questions raised by this submission to the undersigned at 617-951-7000. Should an extension of time be required, Applicants hereby petition for same

and request that the extension fee and any other fee required for timely consideration of this submission be charged to **Deposit Account No. 18-1945.**

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Respectfully Submitted,



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